Claims

## 1. A compound of formula (I)

$$R^2$$
 $N$ 
 $R^3$ 
 $R^4$ 

and pharmaceutically acceptable salts thereof, in which.

R<sup>1</sup> and R<sup>2</sup> independently represent phenyl, thienyl or pyridyl each of which is independently optionally substituted by one or more groups represented by Z;

Z represents a C<sub>1-8</sub>alkyl group optionally substituted by one or more: hydroxy; a C<sub>1-6</sub>alkoxy group optionally substituted by one or more fluoro; a C3-8cycloalkyl group; a saturated or partially unsaturated 5 to 8 membered heterocyclic group containing one or more heteroatoms selected from nitrogen, oxygen or sulphur; or by a group NR<sup>10</sup>R<sup>11</sup> (in which R<sup>10</sup> and R<sup>11</sup> independently represent hydrogen, a C<sub>1-6</sub>alkyl group, a C<sub>1-6</sub>alkanoyl group or a C<sub>1-6</sub>alkoxycarbonyl group), or Z represents a C<sub>3-8</sub>cycloalkyl group, a C<sub>1-6</sub>alkoxy group (optionally substituted by one or more fluoro), hydroxy, halo, trifluoromethyl, trifluoromethylthio, trifluoromethylsulphonyl, nitro, a group NR<sup>10</sup>R<sup>11</sup> (in which R<sup>10</sup> and R<sup>11</sup> independently represent hydrogen, a C1-6alkyl group, a C1-6alkanoyl group or a C1-6alkoxycarbonyl group), mono or di C1.3alkylamido, C1.3alkylthio, C1.3alkylsulphonyl, C1. 3alkylsulphonyloxy, C<sub>1-3</sub>alkoxycarbonyl, carboxy, cyano, carbamoyl, mono or di C<sub>1-3</sub>alkyl carbamoyl, sulphamoyl, acetyl, an aromatic heterocyclic group which is optionally substituted by one or more halo, C1.4alkyl, trifluoromethyl or trifluoromethoxy and a saturated or partially unsaturated 5 to 8 membered heterocyclic group containing one or more heteroatoms selected from nitrogen, oxygen or sulphur wherein the heterocyclic group is optionally substituted by one or more C<sub>1-3</sub>alkyl groups, hydroxy, fluoro, benzyl or an amino group -NRxRy in which Rx and Ry independently represent H or C1.4alkyl;

R<sup>3</sup> represents a group of formula X-Y-NR<sup>5</sup>R<sup>6</sup> in which X is CO or SO<sub>2</sub>

and Y is absent or represents NH optionally substituted by a C<sub>1-3</sub>alkyl group and R<sup>5</sup> and R<sup>6</sup> independently represent:

a C<sub>1-6</sub>alkyl group optionally substituted by one or more hydroxy;

an  $(amino)C_{1-4}alkyl-$  group in which the amino is optionally substituted by one or more  $C_{1-3}alkyl$  groups;

a group  $(C_{3-12}\text{cycloalkyl})(CH_2)_g$ — wherein g is 0, 1, 2 or 3 wherein the cycloalkyl is optionally substituted by one or more fluoro, hydroxy,  $C_{1-3}$ alkyl,  $C_{1-3}$ alkoxy, trifluoromethyl or trifluoromethoxy;

a group -(CH<sub>2</sub>)<sub>r</sub>(phenyl)<sub>s</sub> in which r is 0, 1, 2, 3 or 4, s is 1 when r is 0 otherwise s is 1 or 2 and the phenyl groups are optionally independently substituted by one or more groups represented by Z;

naphthyl;

anthracenyl;

a saturated or partially unsaturated 5 to 8 membered heterocyclic group containing one or more heteroatoms selected from nitrogen, oxygen or sulphur wherein the heterocyclic group is optionally substituted by one or more  $C_{1-3}$ alkyl groups, hydroxy, fluoro, trifluoromethyl, benzyl or an amino group -NR<sup>x</sup>R<sup>y</sup> in which R<sup>x</sup> and R<sup>y</sup> independently represent H or  $C_{1-4}$ alkyl;

1-adamantylmethyl;

a group –  $(CH_2)_t$  Het in which t is 0,1, 2, 3 or 4, and the alkylene chain is optionally substituted by one or more  $C_{1-3}$ alkyl groups and Het represents an aromatic heterocyclic group optionally substituted by one, two or three groups selected from a  $C_{1-5}$ alkyl group, a  $C_{1-5}$ alkoxy group or halo;

or R5 represents H and R6 is as defined above;

or R<sup>5</sup> and R<sup>6</sup> together with the nitrogen atom to which they are attached represent a saturated or partially unsaturated 5 to 8 membered heterocyclic group containing one nitrogen and optionally one of the following: oxygen, sulphur or an additional nitrogen; wherein the heterocyclic group is optionally substituted by one or more more C<sub>1.3</sub>alkyl

groups, hydroxy, fluoro, trifluoromethyl, trifluoromethoxy, benzyl, C<sub>1-6</sub>alkanoyl or an amino group -NR<sup>x</sup>R<sup>y</sup> in which R<sup>x</sup> and R<sup>y</sup> independently represent H or C<sub>1-4</sub>alkyl;

R<sup>4</sup> represents a group of formula (CH<sub>2</sub>), COOR<sup>7</sup>

in which n is 0, 1, 2, 3 or 4; and  $R^7$  represents a  $C_{4-12}$ alkyl group, a  $C_{3-12}$ cycloalkyl group or a  $(C_{3-12}$ cycloalkyl) $C_{1-3}$ alkyl— group each of which is optionally substituted by one or more of the following: a  $C_{1-6}$ alkyl group; fluoro, amino or hydroxy, or

R<sup>7</sup> represents a group -(CH<sub>2</sub>)<sub>n</sub>phenyl in which a is 0, 1, 2, 3 or 4 and the phenyl group is optionally substituted by one or more groups represented by Z which may be the same or different or

R<sup>7</sup> represents a saturated or partially unsaturated 5 to 8 membered heterocyclic group containing one or more of the of the following: oxygen, sulphur or nitrogen; wherein the heterocyclic group is optionally substituted by one or more C<sub>1-3</sub>alkyl groups, C<sub>1-3</sub>acyl groups, hydroxy, amino or benzyl; or

R<sup>4</sup> represents a group of formula -(CH<sub>2</sub>)<sub>o</sub>-O-(CH<sub>2</sub>)<sub>p</sub>- R<sup>8</sup> in which o and p independently represent an integer 0, 1, 2, 3 or 4 and each of the alkyl chains is independently optionally substituted by one or more C<sub>1-6</sub>alkyl groups, C<sub>1-6</sub>alkoxy groups or hydroxy and R<sup>8</sup> represents a C<sub>1-12</sub>alkyl group or a C<sub>1-12</sub>alkoxy group or R<sup>8</sup> represents phenyl optionally independently substituted by one or more Z groups or R<sup>8</sup> represents an aromatic heterocyclic group or a saturated or partially unsaturated 5 to 8 membered heterocyclic group containing one or more of one following: oxygen, sulphur or nitrogen wherein each of these rings is optionally substituted by one or more groups represented by Z which may be the same or different; with the proviso that R<sup>4</sup> is not a C<sub>1-3</sub>alkoxymethyl group unless R<sup>3</sup> represents a group of formula X-YNR<sup>5</sup>R<sup>6</sup> in which X is CO and Y is absent and R<sup>5</sup> is H and R<sup>6</sup> is a C<sub>3-8</sub> cycloalkyl group substituted by one or more fluoro or X is CO and Y is NH and NR<sup>5</sup>R<sup>6</sup> together represent a piperidino group substituted by one or more fluoro; or R<sup>8</sup>

represents a C<sub>3-8</sub>cycloalkyl group or a C<sub>3-8</sub>cycloalkenyl group optionally substituted by one or more groups represented by Z which may be the same or different;

R<sup>4</sup> represents a C<sub>4-12</sub>alkyl group optionally substituted by one or more fluoro, hydroxy, or amino; or

R<sup>4</sup> represents a group of formula -(CH<sub>2</sub>)<sub>q</sub>R<sup>9</sup> in which q is 0, 1, 2, 3 or 4 and R<sup>9</sup> represents a C<sub>3-12</sub>cycloalkyl group, a C<sub>3-12</sub>cycloalkenyl group, phenyl, an aromatic heterocyclic group or a saturated or partially unsaturated 5 to 8 membered heterocyclic group containing one or more of one following: oxygen, sulphur or nitrogen wherein each of these rings is optionally substituted by one or more groups represented by Z which may be the same or different; or

 $R^4$  represents a group of formula  $-L^1R^9$  in which  $L^1$  represents a  $C_{2-6}$ alkenylene chain optionally substituted by one or more  $C_{1-4}$ alkyl groups and  $R^9$  is as previously defined; or

 $R^4$  represents a group of formula -(CH<sub>2</sub>)<sub>m</sub>-O-(CO)-  $R^{10}$  in which m represents an integer 0, 1, 2, 3 or 4, in which  $R^{10}$  represents a  $C_{1-12}$ alkyl group optionally substituted by one or more fluoro, hydroxy, or amino or  $R^{10}$  represents a group of formula -(CH<sub>2</sub>)<sub>q</sub> $R^9$  in which q and  $R^9$  is as previously described; or

R<sup>4</sup> represents a group of formula CONR<sup>11</sup>R<sup>12</sup> in which R<sup>11</sup> and R<sup>12</sup> independently represent H or a C<sub>1-8</sub>alkyl group or a C<sub>1-8</sub>alkyl group substituted by one or more hydroxy groups provided that at least one of R<sup>11</sup> and R<sup>12</sup> is a hydroxyC<sub>1-8</sub>alkyl group; or

R<sup>4</sup> represents a group of formula -L<sup>2</sup>CN in which L<sup>2</sup> represents a C<sub>1-6</sub>alkylene chain.

2. A compound according to claim 1 represented by formula IIa

$$R^2$$
 $N$ 
 $N$ 
 $R^5$ 
 $R^6$ 

lla

wherein R<sup>1</sup> and R<sup>2</sup> independently represent phenyl optionally independently substituted by halo or pyridyl,

 $R^4$  represents a  $C_{4.8}$ alkyl group, a group  $CH_2OR^8$  in which  $R^8$  is a  $C_{4.8}$ alkyl group, a group  $CO_2R^7$  in which  $R^7$  represents a  $C_{4.8}$ alkyl group, and Y is represents NH and  $R^5$  represents H and

R<sup>6</sup> represents perfluorophenyl or phenyl optionally substituted by trifluoromethyl or R<sup>5</sup> and R<sup>6</sup> together with the nitrogen to which they are attached represent piperidino, morpholino or piperazino each of which is optionally substituted by one or more C<sub>1-3</sub>alkyl groups, hydroxy, fluoro, trifluoromethyl, trifluoromethoxy, benzyl, C<sub>1-6</sub>alkanoyl or an amino group NR<sup>x</sup>R<sup>y</sup> in which R<sup>x</sup> and R<sup>y</sup> independently represent H or C<sub>1-4</sub>alkyl:

is or Y is absent and

R<sup>5</sup> represents H or a C<sub>1-6</sub>alkyl group optionally substituted by amino;

R<sup>6</sup> represents tetrahydropyranyl or 4- piperidinyl optionally substituted by one or more C<sub>1-3</sub>alkyl groups, hydroxy, fluoro, trifluoromethyl, trifluoromethoxy, benzyl, C<sub>1-6</sub>alkanoyl or an amino group -NR<sup>x</sup>R<sup>y</sup> in which R<sup>x</sup> and R<sup>y</sup> independently represent H or C<sub>1-4</sub>alkyl or a C<sub>1-6</sub>alkyl group optionally substituted by amino;

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 $R^5$  and  $R^6$  together with the nitrogen to which they are attached represent piperidino, morpholino or piperazino each of which is optionally substituted by  $C_{1-3}$  alkyl or fluoro.

3. A compound according to claim 1 represented by formula IIb

wherein R<sup>1</sup> and R<sup>2</sup> represent phenyl independently optionally substituted by one or more chloro; and

R<sup>7</sup> represents butyl, tert-butyl, cyclohexyl or benzyl.

4. A compound according to claim 1 represented by formula IIc

$$R^2$$
 $N$ 
 $N$ 
 $(CH_2)_u$ 
 $R$ 

llo

wherein R<sup>1</sup> and R<sup>2</sup> represent phenyl independently optionally substituted by one or more chloro or methyl;

u is 0, 1, 2, 3, or 4;

R<sup>J</sup> represents triazolyl, tetrazolyl, imidazolyl, pyrrolyl, thiazolyl, oxazolyl, oxazinolyl, isoxazolyl, isothiazolyl, oxadiazolyl, thiadiazolyl, azolactonyl or azetidinyl each of which is optionally substituted by one or more of the following: morpholinyl, piperidinyl, pyrrolidinyl, a C<sub>1-3</sub>alkylthio group, a C<sub>3-6</sub>cycloalkyl group, C<sub>1-3</sub>alkoxy, hydroxy, amino, C<sub>1-6</sub>alkylamino, di(C<sub>1-6</sub>alkyl)amino, or a C<sub>1-6</sub>alkyl group optionally substituted by one or more of the following: C<sub>1-3</sub>alkoxy, hydroxy, amino, C<sub>1-6</sub>alkylamino, di(C<sub>1-6</sub>alkyl)amino, morpholinyl, piperidinyl or pyrrolidinyl or a group of formula CH(X)R<sup>p</sup>R<sup>q</sup> in which X is hydroxy, a C<sub>1-6</sub>alkoxy group, difluoromethoxy, C<sub>1-6</sub>alkyl, amino, C<sub>1-6</sub>alkylamino, di(C<sub>1-6</sub>alkyl)amino, morpholinyl, piperidinyl or pyrrolidinyl, R<sup>p</sup> represents hydrogen, a C<sub>1-6</sub>alkyl

group or a  $C_{3-6}$ cycloalkyl group and  $R^q$  represents hydrogen, a  $C_{1-6}$ alkyl group or a  $C_{3-6}$ cycloalkyl group or  $R^j$  represents  $C_{1-6}$ alkoxy group terminally substituted on carbon by one or more fluoro; and

R<sup>k</sup> represents piperidino, 4,4-difluorocyclohexyl or C<sub>3-6</sub>alkyl optionally substituted by hydroxy.

5. A compound according to claim 4 in which R<sup>1</sup> and R<sup>2</sup> represent phenyl independently optionally substituted by one or more chloro or methyl;

R<sup>j</sup> represents triazolyl or tetrazolyl each of which is optionally substituted by one or more of the following: a C<sub>1-3</sub>alkylthio group, a C<sub>3-6</sub>cycloalkyl group or a C<sub>1-6</sub>alkyl group optionally substituted by one or more of the following: C<sub>1-3</sub>alkoxy, hydroxy, amino, C<sub>1-6</sub>alkylamino, di(C<sub>1-6</sub>alkyl)amino, morpholinyl, piperidinyl or pyrrolidinyl or a group of formula CH(X)R<sup>p</sup>R<sup>q</sup> in which X is hydroxy, difluoromethoxy, C<sub>1-6</sub>alkyl, amino C<sub>1-6</sub>alkylamino, di(C<sub>1-6</sub>alkyl)amino, morpholinyl, piperidiyl or pyrrolidinyl, R<sup>p</sup> represents hydrogen, a C<sub>1-6</sub>alkyl group or a C<sub>3-6</sub>cycloalkyl group and R<sup>q</sup> represents hydrogen, a C<sub>1-6</sub>alkyl group or a C<sub>3-6</sub>cycloalkyl group or R<sup>j</sup> represents C<sub>1-6</sub>alkoxy group terminally substituted on carbon by one or more fluoro; and u is 0 or 1; and

R<sup>k</sup> represents piperidino, 4,4-difluorocyclohexyl or C<sub>3-6</sub>alkyl optionally substituted by hydroxy.

6. A compound selected from one or more of the following:

tert-butyl 5,6-bis(4-chlorophenyl)-3-[(piperidin-1-ylamino)carbonyl]pyrazine-2-carboxylate;

butyl 5,6-bis(4-chlorophenyl)-3-[(piperidin-1-ylamino)carbonyl]pyrazine-2-carboxylate; cyclohexyl 5,6-bis(4-chlorophenyl)-3-[(piperidin-1-ylamino)carbonyl]pyrazine-2-carboxylate;

benzyl 5,6-bis(4-chlorophenyl)-3-[(piperidin-1-ylamino)carbonyl]pyrazine-2-carboxylate; tert-butyl 5,6-bis(4-chlorophenyl)-3-({[cis-2-hydroxycyclohexyl]amino}carbonyl)-pyrazine-2-carboxylate;

tert-butyl 5,6-bis(4-chlorophenyl)-3-({[trans-2-hydroxycyclohexyl]amino}carbonyl)-

pyrazine-2-carboxylate;

- tert-butyl 5,6-bis(4-chlorophenyl)-3-({2-[4-(trifluoromethyl)phenyl]hydrazino}carbonyl)-pyrazine-2-carboxylate;
- tert-butyl 5,6-bis(4-chlorophenyl)-3-[(morpholin-4-ylamino)carbonyl]pyrazine-2-carboxylate;
- tert-butyl 5,6-bis(4-chlorophenyl)-3-({2-[4-(tert-butylhydrazino}carbonyl)pyrazine-2-carboxylate;
  - 3-(tert-butoxymethyl)-5,6-bis(4-chlorophenyl)-N-piperidin-1-ylpyrazine-2-carboxamide; 5,6-bis(4-chlorophenyl)-3-(cyclohexylidenemethyl)-N-piperidin-1-ylpyrazine-2-carboxamide;
- 5,6-bis(4-chlorophenyl)-3-(cyanomethyl)-N-piperidin-1-ylpyrazine-2-carboxamide; 5,6-bis(4-chlorophenyl)-3-(1-methoxyethyl)-N-piperidin-1-ylpyrazine-2-carboxamide tert-butyl 5,6-bis(4-chlorophenyl)-3-{[(2-hydroxy-1-methylethyl)amino]carbonyl}pyrazine-2-carboxylate;
  - tert-butyl 5,6-bis(4-chlorophenyl)-3-{[(4,4-difluorocyclohexyl)amino]carbonyl)pyrazine-2-carboxylate;
  - tert-butyl 5,6-bis(4-chlorophenyl)-3-[(pentylamino)carbonyl]pyrazine-2-carboxylate; tert-butyl 5,6-bis(4-chlorophenyl)-3-{[(1-ethylpropyl)amino]carbonyl}pyrazine-2-carboxylate;
  - tert-butyl 5,6-bis(4-chlorophenyl)-3-{[(4,4-difluoropiperidin-1-yl)amino]carbonyl}-pyrazine-2-carboxylate;
  - 5,6-bis(4-chlorophenyl)-N-piperidin-1-yl-3-[(4-propyl-1H-1,2,3-triazol-1-yl)methyl]pyrazine-2-carboxamide;
  - 5,6-bis(4-chlorophenyl)-3-{[4-(1-hydroxyethyl)-1H-1,2,3-triazol-1-yl]methyl}-N-piperidin-1-ylpyrazine-2-carboxamide;
- 5,6-bis(4-chlorophenyl)-3-{[5-(1-hydroxyethyl)-1H-1,2,3-triazol-1-yl]methyl}-N-piperidin-1-ylpyrazine-2-carboxamide;
  - tert-butyl {[1-({5,6-bis(4-chlorophenyl)-3-[(piperidin-1-ylamino)carbonyl]pyrazin-2-yl}methyl}-1H-1,2,3-triazol-4-yl]methyl}carbamate;
  - tert-butyl {[1-({5,6-bis(4-chlorophenyl)-3-[(piperidin-1-ylamino)carbonyl]pyrazin-2-
- 30 yl}methyl)-1H-1,2,3-triazol-5-yl]methyl}carbamate;

- 1-ylpyrazine-2-carboxamide;
- 3-{[5-(aminomethyl)-1H-1,2,3-triazol-1-yl]methyl}-5,6-bis(4-chlorophenyl)-N-piperidin
- 1-ylpyrazine-2-carboxamide;
- 5,6-bis(4-chlorophenyl)-3-(phenoxymethyl)-N-piperidin-1-ylpyrazine-2-carboxamide;
  - 5,6-bis(4-chlorophenyl)-3-(morpholin-4-ylmethyl)-N-piperidin-1-ylpyrazine-2-carboxamide;
  - 5,6-bis(4-chlorophenyl)-3-(piperidin-1-ylmethyl)-N-piperidin-1-ylpyrazine-2-carboxamide;
- 5,6-bis(4-chlorophenyl)-3-[(cyclohex-2-en-1-yloxy)methyl]-N-piperidin-1-ylpyrazine-2-carboxamide;
  - 5,6-bis(4-chlorophenyl)- 3- [(cyclohexyloxy)methyl]-N-piperidin-1-ylpyrazine-2-carboxamide;
  - 5,6-bis(4-chlorophenyl)- N-(2-hydroxyethyl)-N'-piperidin-1-ylpyrazine-2,3 -
- 15 dicarboxamide;
  - 5,6-bis(4-chlorophenyl)- N-(3-hydroxybutyl)-N'-piperidin-1-ylpyrazine-2,3 dicarboxamide;
  - 5,6-bis(4-chlorophenyl)- *N*-(3-hydroxypropyl)-*N*'-piperidin-1-ylpyrazine-2,3 dicarboxamide;
- Tert-butyl 5,6-bis(4-methylphenyl)-3-[(piperidin-1-ylamino)carbonyl]pyrazine-2-carboxylate;
  - 5,6-bis(4-methylphenyl)-N-piperidin-1-yl -3 -(1H-tetrazol-1-ylmethyl)pyrazine-2-carboxamide;
  - 5,6-bis(4-methylphenyl)-N-piperidin-1-yl -3 -(2H-tetrazol-2-ylmethyl)pyrazine-2-carboxamide;
  - 5,6-bis(4-chlorophenyl)-N-piperidin-1-yl -3 -(2H-tetrazol-2-ylmethyl)pyrazine-2-carboxamide;
  - 5,6-bis(4-chlorophenyl)-N-piperidin-1-yl-3-(1H-tetrazol-1-ylmethyl)pyrazine-2-carboxamide;

- 5,6-bis(4-chlorophenyl)-N-(4,4-difluorocyclohexyl)-3-(2H-tetrazol-2-ylmethyl)pyrazine-
- 2-carboxamide;
- 5,6-bis(4-chlorophenyl)-N-(4,4-difluoropiperidin-1-yl)-3-(2H-tetrazol-2-
- ylmethyl)pyrazine-2-carboxamide:
- 5,6-bis(4-chlorophenyl)-3-[(2-methoxyethoxy)methyl]-N-piperidin-1-ylpyrazine-2-carboxamide;
  - 5,6-bis(4-chlorophenyl)-3-[(5-cyclopropyl-2*H*-tetrazol-2-yl)methyl]-*N*-piperidin-1-ylpyrazine-2-carboxamide;
  - 5,6-bis(4-chlorophenyl)-3-[(5-cyclopropyl-1H-tetrazol-1-yl)methyl]-N-piperidin-1-
- o ylpyrazine-2-carboxamide;
  - 5,6-bis(4-chlorophenyl)-3-[(5-methyl-2*H*-tetrazol-2-yl)methyl]-*N*-piperidin-1-ylpyrazine-
  - 2-carboxamide;
  - 5,6-bis(4-chlorophenyl)-3-[(5-methyl-1*H*-tetrazol-1-yl)methyl]-*N*-piperidin-1-ylpyrazine-
  - 2-carboxamide:
- is tert-butyl 6-(4-chlorophenyl)-5-(4-methylphenyl)-3-[(piperidin-1
  - ylamino)carbonyl]pyrazine-2-carboxylate;
  - tert-butyl 5-(4-chlorophenyl)-6-(4-methylphenyl)-3-[(piperidin-1-
  - ylamino)carbonyl]pyrazine-2-carboxylate;
  - 6-(4-chlorophenyl)-5-(4-methylphenyl)-N-piperidin-1-yl-3-(2H-tetrazol-2-
- 20 ylmethyl)pyrazine-2-carboxamide;
  - 5-(4-chlorophenyl)-6-(4-methylphenyl)-N-piperidin-1-yl-3-(2H-tetrazol-2-
  - ylmethyl)pyrazine-2-carboxamide:
  - tert-butyl 5,6-bis(4-chlorophenyl)-3-[[(2-hydroxyethyl)(methyl)amino]-
  - carbonyl) pyrazine-2-carboxylate;
- 25 5,6-bis-(4-chloro-phenyl)-3-propoxy-pyrazine-2-carboxylic acid piperidin-1-ylamide;
  - 5, 6-b is (4-chlorophenyl)- N-piperidin-1-yl-3-(2H-tetrazol-5-ylmethyl) pyrazine-2-ylmethyl) pyrazine-2-ylmethyll
  - carboxamide
  - 5,6-bis(4-chlorophenyl)-N-piperidin-1-yl-3-(1H-tetrazol-5-yl)pyrazine-2-carboxamide;
  - 5,6-bis(4-chlorophenyl)-3-[(5-morpholin-4-yl-2H-tetrazol-2-yl)methyl]-N-piperidin-1-
- 30 ylpyrazine-2-carboxamide;

- 5,6-bis(4-chlorophenyl)-3-[(5-morpholin-4-yl-1*H*-tetrazol-1-yl)methyl]-*N*-piperidin-1-ylpyrazine-2-carboxamide;
- 5,6-bis(4-chlorophenyl)-N-piperidin-1-yl-3-[(5-pyrrolidin-1-yl-2H-tetrazol-2-yl)methyl]pyrazine-2-carboxamide;
- 5,6-bis(4-chlorophenyl)-N-piperidin-1-yl-3-[(5-pyrrolidin-1-yl-1H-tetrazol-1-yl)methyl]pyrazine-2-carboxamide;
  - $\label{eq:continuous} 5,6-bis(4-chlorophenyl)-3-\{[5-(methylthio)-2H-tetrazol-2-yl]methyl\}-N-piperidin-1-ylpyrazine-2-carboxamide;$
  - 5,6-bis(4-chlorophenyl)-3-{[5-(methylthio)-1H-tetrazol-1-yl]methyl}-N-piperidin-1-
- o ylpyrazine-2-carboxamide;
  - 5,6-bis(4-chlorophenyl)-N-(4,4-difluorocyclohexyl)-3-(methoxymethyl)pyrazine-2-carboxamide;
  - 5,6-bis(4-chlorophenyl)-N-(4,4-difluorocyclohexyl)-3-{[(4-fluorobenzyl)oxy]methyl}pyrazine-2-carboxamide;
- 5,6-bis(4-chlorophenyl)-3-[(4,4-difluoropiperidin-1-yl)methyl]-N-piperidine-1-ylpyrazine-2-carboxamide;
  - 5,6-bis(4-chlorophenyl)-N-(4,4-difluorocyclohexyl)-3-[(4,4-difluoropiperidin-1-yl)methyl]pyrazine-2-carboxamide; or
  - 5,6-bis(4-chlorophenyl)-N-(4,4-difluoropiperidin-1-yl)-3-(methoxymethyl)pyrazine-2-carboxamide;
  - and pharmaceutically acceptable salts thereof.
  - 7. A compound of formula I as claimed in any previous claim for use as a medicament.
- 8. A pharmaceutical formulation comprising a compound of formula I, as defined in any one of claims 1 to 6 and a pharmaceutically acceptable adjuvant, diluent or carrier.
  - 9. Use of a compound of formula I according to any one of claims 1 to 6 in the preparation of a medicament for the treatment or prophylaxis of obesity, psychiatric disorders such as psychotic disorders, schizophrenia and bipolar disorders, anxiety, anxiodepressive disorders, depression, cognitive disorders, memory disorders, obsessive-compulsive disorders, anorexia, bulimia, attention disorders, epilepsy, and related

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conditions, and neurological disorders such as dementia, neurological disorders, Parkinson's Disease, Huntington's Chorea and Alzheimer's Disease, immune, cardiovascular, reproductive and endocrine disorders, septic shock, diseases related to the respiratory and gastrointestinal systems, and extended abuse, addiction and/or relapse indications.

- 10. A method of treating obesity, psychiatric disorders, psychotic disorders, schizophrenia and bipolar disorders, anxiety, anxio-depressive disorders, depression, cognitive disorders, memory disorders, obsessive-compulsive disorders, anorexia, bulimia, attention disorders, epilepsy, and related conditions, neurological disorders, neurological disorders, Parkinson's Disease, Huntington's Chorea and Alzheimer's Disease, immune, cardiovascular, reproductive and endocrine disorders, septic shock, diseases related to the respiratory and gastrointestinal system, and extended abuse, addiction and/or relapse indications, comprising administering a pharmacologically effective amount of a compound of formula I according to claim 1 to a patient in need thereof.
- 11. A compound as defined in any one of claims 1 to 6 for use in the treatment of obesity.
- 12. A compound as defined in any one of claims 1 to 6 in combination with another pharmaceutically active compound.
- 13. A process to prepare a compound of formula I according to claim 1 comprising a) reacting a compound of formula III

$$R^2$$
 $N$ 
 $CO_2H$ 
 $R^4$ 

Ш

in which  $R^1$ ,  $R^2$  and  $R^4$  are as previously defined with an amine of formula IV  $R^5R^6$  YNH<sub>2</sub> IV

in which Y, R<sup>5</sup> and R<sup>6</sup> are as previously defined in a solvent, in the presence of a coupling agent and optionally in the presence of a base at a temperature in the range of -25°C to 150°C to give compounds of formula I in which R<sup>1</sup>, R<sup>2</sup> and R<sup>4</sup> are as previously defined and R<sup>3</sup> is COYNR<sup>5</sup>R<sup>6</sup> as previously defined, or

b) reacting an azide of formula XI

in which  $R^1$ ,  $R^2$  and  $R^3$  are as previously defined with an acetylene of formula XII H-C $\equiv$ C-Z

XII

in which Z is as previously defined in an inert solvent and optionally in the presence of a catalyst at a temperature in the range of  $-25^{\circ}$ C to  $150^{\circ}$ C to give compounds of formula I in which  $R^1$ ,  $R^2$  and  $R^3$  are as previously defined and  $R^4$  represents a group  $CH_2(1H-1,2,3-triazol-1-yl)$  in which the triazole is optionally substituted on carbon by Z; or

c) reacting a compound of formula XIV

XIV

in which  $R^1$ ,  $R^2$  and  $R^4$  are as previously defined and  $R^6$  represents an alkyl group with an amine of formula IV

R<sup>5</sup> R<sup>6</sup> YNH₂ IV

or a salt thereof in which Y, R<sup>5</sup> and R<sup>6</sup> are as previously defined in a solvent in the presence of a coupling agent and optionally in an inert atmosphere at a temperature in the

range of -25°C to 150°C to give compounds of formula I in which R<sup>1</sup>, R<sup>2</sup> and R<sup>4</sup> are as previously defined and R<sup>3</sup> is COYNR<sup>5</sup>R<sup>6</sup>; or

d) reacting a compound of formula XV

$$R^2$$
 $N$ 
 $COX$ 
 $R^4$ 

XV

in which  $R^1$ ,  $R^2$  and  $R^4$  are as previously defined and X represents a leaving group with an amine of formula IV

R<sup>5</sup> R<sup>6</sup> YNH<sub>2</sub>

TV

or a salt thereof in which Y, R<sup>5</sup> and R<sup>6</sup> are as previously defined in a solvent optionally in the presence of a base at a temperature in the range of -25°C to 150°C to give compounds of formula I in which R<sup>1</sup>, R<sup>2</sup> and R<sup>4</sup> are as previously defined and R<sup>3</sup> is COYNR<sup>5</sup>R<sup>6</sup>; or d) de-protecting compounds of formula I, in which one or more groups is protected, to give a compounds of formula I.

14. A compound of formula XI

$$R^2$$
 $N$ 
 $R^3$ 
 $R^3$ 

in which R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> are as previously defined.